



A soggy space is a popular place. Of course, people visit wetlands to learn about them or to help with research, but wetlands are home to thousands of animals, including birds like the white ibis (above) and the American

purple gallinule (below right). Frogs and other amphibians need wetlands for breeding grounds.

Located on every continent but Antarctica, wetlands take up about one-sixth of the land on Earth. If

joined together, they would cover an area roughly the size of Brazil. No wonder they are so important!

Not all wetlands are alike. Follow us for a tour of the four kinds: bogs, fens, marshes, and swamps.



# Wet

*Name a plant or animal and, chances are, you'll find it in a wetland. That's because wetlands—areas that are wet at least part of the year—are home to over one-third of the world's species.*

*Is*

## *Wonderful*

*by Galadriel Watson*



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**W**etlands are an essential part of the water cycle. During droughts, they release water. During floods, they soak it up. Wetland plants slow down floodwaters and hold banks and shorelines in place, reducing erosion.

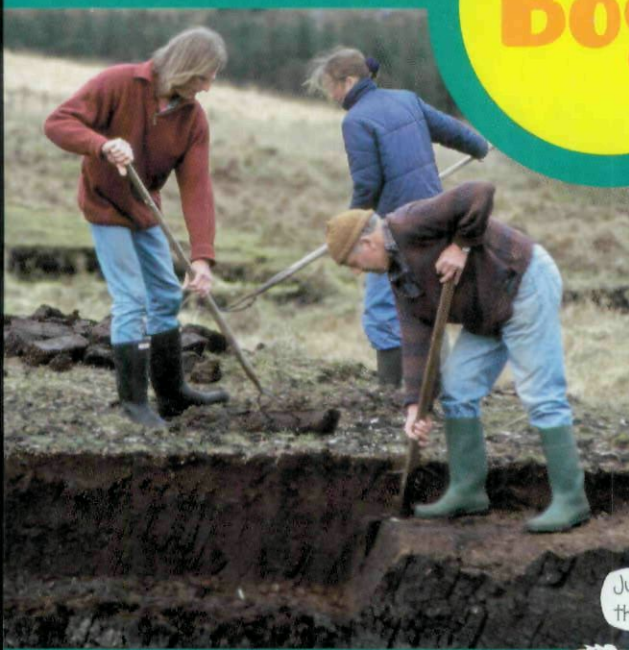
Wetlands clean water, too. When water passes through wetland soils and the plant matter there, the sediments it carries sink to the bottom. Wetland plants and micro-organisms absorb pollutants. As a result, the water that leaves a wetland is much cleaner than the water that entered it.

Wetlands are so good at cleaning water, scientists sometimes create them to help control pollution. But scientists have another job: to keep natural wetlands healthy. Human activity is taking its toll on wetlands. Many get filled in to make room for roads, farms, and housing. And too much pollution can harm a wetland, killing its plants and animals. Conservationists strive to preserve these important areas.



## Bogs

A depression in the land that fills with rain or snow—and nothing but rain or snow—may very well become a bog. Plants depend on minerals to survive, but rain and snow bring very few minerals. Sphagnum moss (right) is one of the few plants that can stand these conditions. It grows so well, it often takes over the entire bog. When it dies, its dead matter piles up, forming thick mats called peat (left).



For thousands of years, people have harvested peat to use as fuel for fires. In only a few days, humans can destroy a bog that took 10,000 years to form.



You won't see many mammals in bogs. The rare northern bog lemming is one of the few that stay year-round. Others may meander through.



# Fens



Buzzing bugs, bugs, bugs are among the creatures that frequent fens. Dragonflies (above) are particularly plentiful. Mosquitoes can be found in wetlands worldwide. They can even survive the clutches of many carnivorous plants.

If you take a bog and add a few minerals, you've got a fen. The minerals may come from streams, surface runoff, or groundwater. They allow a greater variety of plants to flourish. Plants may benefit when the fen dries up from time to time, letting oxygen enter the soil. You'll still find sphagnum moss, but also grasses, reeds, and wildflowers. Plants adapted to living in waterlogged soil—in fens and other wetlands—are called hydrophytes.

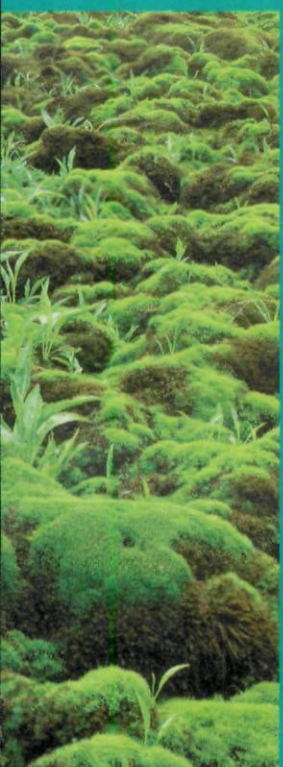


Colorful orchids like this pink lady's slipper are fond of fens. Worldwide, there are up to 30,000 species of orchids. This *Vertigo geyeri* snail (far left) is found only in fens in northern Europe. It uses the water's high calcium content to build its shell.

Frost coats the clumped plants of this peat bog (left) in the Vosges Mountains of France.



Carnivorous plants thrive in mineral-poor bogs. That's because they get their minerals in a unique way: by devouring insects. This thread-leaved sundew is feeding on a moth.



# Marshes

Migratory birds like herons, Canada geese, and ducks often stop at wetlands. Many are adapted for a watery life, with long legs for wading and long bills for snatching fish.



A marsh can be found alongside any body of water, be it a stream, lake, or ocean. It can contain fresh or salt water. With so many minerals coming in, a marsh has rich soils that support many plants, especially grasses and reeds like cattails. Reeds are called emergents because they are rooted underwater while their tall stems emerge above water. Reed stems are hollow, to carry oxygen from the leaves to the roots.



Many species of fish and shellfish, like this lopsided fiddler crab, live and breed in marshes.



When these baby gators submerge, their nostrils, eyes, and ears will remain above water.

# Swamps



If trapped in a small pool, a manatee can go without eating for up to seven months.





Got big trees? Murky water? Water-loving creatures like crocodiles? Then you've got a swamp. Swamps can be permanent, or they can appear during floods. Like marshes, they can contain fresh or salt water, and they can develop alongside rivers and ocean coasts, or on low-lying land. Unlike marshes, their rich soils support

shrubs and trees rather than grasses and reeds.

Except during flooding, swamp water is still. This means not much oxygen gets churned into it, so dead plant matter takes a long time to decay. This decaying matter makes the water look dark and thick.

An endangered Florida panther rests at the "knee" of a tree. These wide bases keep rushing floodwaters from pushing the trees over.



Mangrove trees get oxygen by keeping their roots above water. They get rid of any extra salt by storing it in their leaves, which then drop off.

When waters recede, the mudskipper fish can survive on dry land as long as it keeps its skin moist.



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